1. Find the coordinates of the points where the circle $(x + 2)^2 + (y - 4)^2 = 5$ meets the line $y = -2x + 4$.

2. Write equation of a line passing through point $(4, 4)$ and parallel to line $y = 7/2x - 4$.

3. Draw graph of function $y = |x - 1|$. Then reflect this graph over x-axis and y-axis and plot the corresponding function. What is the equation of this graph?

4. Expand as sum of powers of x: $(2x + 5)^4$

5. Plot the following parabolas and determine the region where they are less than zero [Hint: use completion of the square method and find the roots].
   (a) $y = x^2 + 2x + 3$
   (b) $y = -x^2 + 6x - 9$

6. Factor the following expressions:
   (a) $p^4 - 4z^{12}$
   (b) $t^2 - 3/2t + 1/2$

7. Solve inequality: $|x - 2| > 3$

8. An arithmetic sequence has first term $a_1 = a$ and common difference $d = -1$. The sum of the first n terms is equal to the sum of the first $3n$ terms. Express a in terms of n.

9. Calculate the sum:
$$\frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} + \cdots + \frac{1}{3^{10}}.$$
What is the sum of the following infinite sum?
$$\frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} + \cdots.$$

10. Solve the following inequalities:
   (a) $(x + 3)(x - 2)^2 \leq 0$
   (b) $\dfrac{x - 2}{x + 3} \leq 3$

11. If we toss a coin 10 times, what is the probability that all will be heads? that there will be exactly one tail? exactly 2 tails?